

IN THE CLAIMS:

1. (Currently Amended) An injector system comprising, in combination, an injector and a syringe for injecting fluid into a patient,

the syringe comprising:

a body;

a plunger movably disposed within the body; and

an encoding device on the body providing syringe information; and

the injector comprising:

a housing;

a motor disposed within the housing;

a controller operably associated with the motor;

a sensor operably associated with the controller and operable to [[detect]] read the encoded syringe information provided by the encoding device on the syringe body;

a drive member disposed in the housing and powered by the motor, the drive member operable to automatically advance and engage the plunger after the syringe is mounted on the injector; and

a plunger engagement detection device operably associated with the controller and operable to indicate when the drive member of the injector has engaged the plunger of the syringe,

wherein the plunger engagement detection device comprises a motor current measuring device operably associated with the motor for measuring motor current, the motor current being affected by increased resistance to advancement of the drive member upon engagement thereof with the plunger of the syringe.

2. (Original) The injector system of Claim 1 wherein the injector controller determines that the syringe is empty from the syringe information provided by the encoding device and causes the drive member to advance the plunger forward within the syringe body to expel air from the syringe.

3. (Original) The injector system of Claim 1 wherein the injector controller determines that the syringe is prefilled from the syringe information provided by the encoding device and substantially stops forward advancement of the drive member upon engagement of the drive member with the plunger.

4. (Original) The injector system of Claim 1 wherein the injector controller substantially stops advancement of the drive member upon engagement of the drive member with the plunger of the syringe.

5.– 16. (Canceled)

17. (Previously Presented) The injector system of Claim 1 wherein the syringe information is encoded on the encoding device and the sensor reads the encoded syringe information when the syringe is mounted on the injector.

18. (Original) The injector system of Claim 17 wherein the drive member automatically advances and engages the plunger when the sensor reads the syringe information encoded on the syringe.

19. – 30. (Canceled)

31. (Previously Presented) The injector system of Claim 1 wherein the plunger engagement detection device is disposed axially of the plunger.